Reading Together: A Successful Reading Fluency Intervention

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The article describes a reading fluency intervention called Reading Together that combines the method of repeated readings (Samuels, 1979) and the Neurological Impress Method (Heckelman, 1969). Sixteen volunteers from various backgrounds were recruited and trained to deliver the Reading Together intervention to struggling readers in third through fifth grade. The differences on the outcome measures between the treatment (n = 29) and comparison (n = 23) were statistically significant. Thus, students in the treatment demonstrated increased reading expression, reading rate, and overall reading scores. Results suggest that Reading Together is a feasible method of increasing students' reading proficiency and can be delivered by trained volunteers.

Research on the scientific teaching of reading includes fluency as an integral part of reading instruction (National Institute of Child Health and Human Development, 2000; Snowling & Hume, 2005). For years, reading fluency has been a leading topic among educators and the expectation that students read accurately at a sufficient rate has been a classroom priority (Paige, Rasinski, & Magpuri-Lavell, 2012). While the Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers [NGA & CCSSO], 2010) focus more on close reading and comprehension of challenging texts, reading fluency is an important reading competency that lays the foundation or allows for close reading and further growth in reading. In essence, reading fluency is a necessary, but insufficient condition, for proficient reading and comprehension. In their research with elementary students who perform poorly on high-stakes, silent reading achievement tests, Valencia and Buly (2004) found that a large percentage of the students exhibited difficulties in some form of reading fluency. Similarly, Rasinski and Padak (1998) reported that reading fluency difficulties were the most common and more profound characteristics exhibited by elementary students who were referred for

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intervention reading services. This study supports teachers and students by offering an additional reading fluency intervention called Reading Together.

Despite its recent recognition, research on reading fluency has been ongoing for years. Smith and colleagues (1952) recognized reading fluency as an area in need of research. Farrell (1966) reported on the timeless strategy for increasing reading fluency: reading aloud. Samuels's (1979) method of repeated readings is a common component in elementary classrooms. In fact, many methods for increasing students' reading fluency from years past remain popular and effective, but there is always a need for additional methods (Kuhn, Schwanenflugel, & Meisinger, 2010). However, some research-based practices are underutilized in contemporary classrooms and could benefit students and support teachers. Heckelman (1966) first described one of these lesser known methods for developing reading fluency, an assisted reading strategy called the Neurological Impress Method (NIM). In NIM, the teacher and student sit side by side, each with a copy of the same text. The teacher and student engage in a form of choral reading with the teacher reading slightly ahead of the student, essentially having the student "chase" the teacher's reading. The teacher reads with appropriate expression and intonation into the ear of the student, literally leading the reader to smoother, faster oral reading. The goal of NIM is to provide a model of prosodic oral reading for students who struggle to read with appropriate phrasing that can contribute to comprehension. Heckelman's first report omitted the results, but indicated that the method was helpful when tutoring an adolescent child who struggled with reading. Later, Heckelman (1969) posited that the NIM method actually "etched" the teacher's words and expression (prosody) into the student's brain. He reported a mean grade level gain score in reading of 1.9. In one case, a student's reading level increased by 5.9 grade levels. The method's early success with learning disabled students was followed by various iterations documented by other researchers over subsequent decades (Arnold, 1972; Cook, Nolan & Zanotti, 1980; Eldredge, 1990; Eldredge & Butterfield, 1986; Eldredge & Quinn, 1988; Henk, 1981; Hollingsworth, 1970, 1978; Topping, 1987). What seemed to be a promising technique, however, has not always produced significant results (Langford, Slade, & Barnett, 1974; Lorenz & Vockrell, 1979).

Typically, students who struggle in reading fluency receive interventions in word recognition accuracy and automaticity (as measured by rate). Automaticity Theory is often used to explain the benefits of reading fluency instruction. When readers automatically recognize words, cognition is allocated for higher level processes, such as reading comprehension. Further, research has confirmed the link between reading fluency and comprehension (Perfetti, 1985; Stanovich, 1986). Conversely, research (Lefly & Pennington, 1991; Levy, Abello, & Lysynchuk, 1997; O'Shea & Sindelar, 1983) also indicates that disfluent reading negatively affects students' reading comprehension. Therefore, students who read disfluently require effective reading fluency interventions that lead to better comprehension (Allington, 1983).

Prosody, the other recognized component of reading fluency, is sometimes neglected (Dowhower, 1991; Paige et al., 2012). Schreiber (1980) theorized that, despite being able to decode individual words, some disfluency is caused by the lack of attention to prosody, reading written language in a way that it would be spoken orally. Teachers using NIM scaffold accurate and automatic reading, as well as prosodic reading (Rasinski & Padak, 2008).

As initially intended, NIM's potential to support reading fluency (accuracy, automaticity, and prosody) and comprehension relates to the linguistic modeling the teacher provides. Viewing the NIM version of assisted reading from a social constructivist perspective, however, affords a different view of its potential. A sociocultural perspective

suggests that the role of teacher-reader is more than providing a model for a student-reader to mimic. Rather, the teacher provides experiences that "stretch" the student to a performance that the student is not yet able to achieve independently. Vygotsky (1978) described the zone of proximal development (ZPD) as the space in which a child can achieve success in learning when aided by a knowledgeable other. In the case of NIM, the teacher selects text beyond the instructional level of the student (Heckelman, 1969), provides a model for fluent reading that the student practices, and thus works at the outer limits of the student's ZPD. Without the assistance of the proficient reader, the student may not experience success when reading difficult material or choose to read material that is linguistically challenging. This sociocultural view of NIM offsets common notions that students develop fluency from reading texts at their instructional level and suggests that some practice with more challenging texts beckons the reader to greater fluency and phrasing that supports comprehension. Ideally, NIM tutoring should serve as a high level scaffold and model for developing students' reading fluency using authentic reading material.

Interestingly, despite its conceptual base and research that supports NIM, few teachers or interventionists actually use NIM as an instructional tool for struggling readers. However, Flood, Lapp, and Fisher (2005) reintroduced this potentially forgotten method to the research arena with their own version of NIM called NIM Plus. Flood et al.'s version of NIM includes a comprehension component. The below-level third through sixth grade students in their study received 200 minutes of NIM Plus tutoring in a 5-week period (a serious decrease from the 720 minutes in Heckelman's [1969] earlier study). Results of the two separate studies in Flood et al.'s article indicated that the 40 students receiving the treatment significantly and substantially outperformed control groups. The method clearly worked effectively in these cases, and could perhaps be strengthened by adding an independent practice component.

Samuels (1979) introduced the instructional fluency protocol called the method of repeated readings, which evolved from LaBerge and Samuels's (1974) theory of automaticity in information processing. He reported that the method effectively increased word recognition automaticity (words read correctly per minute) and word recognition accuracy (a decrease in the number of word recognition errors).

Therrien (2004) conducted a meta-analysis of repeating readings research. Of the extensive literature on repeated readings since Samuels's 1970s research, only 18 articles met the criteria for meta-analysis, and the results indicated that the method effectively increased reading fluency and the ability for students to understand text. Thus, research supports using repeated readings and NIM to support fluency development. From a sociocultural perspective, combining these techniques could provide less fluent students with a model and supported practice with texts that extend students' prosodic reading in authentic texts.

In previous research (Mohr, Dixon, & Young, 2012), Young, then a reading coach, utilized Reading Together with a few a struggling readers. Essentially, he executed NIM and then asked the students to read back the text previously read together. The coach informally reported that his students' subsequent rereadings sounded much like the coach's rendering, as if the students had somehow adopted the tutor's prosody. Therefore, he conducted formal case studies with two students. In one of the case studies, the coach utilized the NIM/Repeated Readings method and observed the student increase from a late first grade to a third grade reading level in 10 weeks. In their discussion of that investigation, Mohr et al. noted that teachers need to be effective and efficient and that sometimes this can be achieved by stacking or integrating instruction. Combining NIM with the repeated reading

is an example of research-recommended component stacking, or the strategic combining of research-based practices with the goal of synergistically improving instruction.

Integrating NIM and repeated readings works well because the interventions complement one another. During NIM, the teacher provides stronger support of the student with word recognition, pacing, and prosody. Typically, according to NIM, this one reading of a text would be the end of the intervention; students would move on to a new text. However, by adding an element of repeated readings, the students are given an opportunity for more independent practice without the support of the teacher. The practice component is important, and because of the previous assistance, the students are more able to experience success and independence. This practice process exemplifies the highly recommended gradual release model of instruction (Pearson & Gallagher, 1983). Children are often motivated by success and independence, and Reading Together may produce sustained results because of the added practice and the successful reading of complex texts.

The present study extends the research on the NIM and repeated readings by combining the two in an instructional protocol referred to as Reading Together. Our study examines the effects of Reading Together on students' reading fluency as measured by words read correctly per minute and a prosody rubric with overall reading scores measured by a computer-based reading assessment. Testing the effectiveness of Reading Together extends the research base by assessing fluency and prosody on several measures. The study also considers the viability of Reading Together, an important factor when considering large-scale implementation of one-on-one interventions. The current investigation was guided by the following research question: Can implementation of the Reading Together intervention significantly increase elementary students' reading fluency and overall reading performance?

Method

Context

Island Elementary (all names of places and people are pseudonyms) is a Title 1 school in the southern United States. The school has a large Hispanic population (89%), and remaining demographics include 8% white, 2% black, and 1% American Indian/Alaska Native. The previous year's state testing results for Island Elementary indicated that only 46% of the students met or exceeded the standard in reading according to the mandatory state examination.

Because the school was not meeting the minimum state requirements, the principal, a graduate from the researcher's institution, contacted the university for support. The researcher agreed to meet with the school's administration and instructional coach to determine an appropriate intervention. Per the diagnostician, many students were struggling with automaticity of basic word recognition. As research suggests, students who struggle with fluency also struggle with comprehension (Lefly & Pennington, 1991; Levy et al., 1997; O'Shea & Sindelar, 1983). Yet, automaticity should be the focus of instruction for such students in hopes that increased automaticity would lead to better reading comprehension (LaBerge & Samuels, 1974; Stanovich, 1986). Therefore, one of the researchers proposed the Reading Together intervention.

Participants

Participants were purposefully chosen by the school's principal and an instructional specialist. These administrators selected students in grades three through five who did not pass

the reading benchmark test administered in the second quarter of the school year. The test is a silent reading proficiency exam aligned with the state standardized test. The researcher sent information about the intervention and consent forms home with the students who met the criteria for inclusion in the study with an option to consent or abstain. Regardless of the parents' decision, students who brought back the signed form by the end of the week were rewarded with permission to wear personal clothes to school for a day rather than school uniforms.

Although more students met the inclusion criteria for the Reading Together intervention, only 30 students were chosen to participate because tutoring personnel were limited. Thus, the research team chose the 30 students that demonstrated the greatest need. Students in the control group were selected based on demographics and reading scores that were similar to the participants in the treatment group. Eventually, 8 students were excluded from the study due to transiency and truancy, and thus a total of 52 students participated in the study. Both the treatment group ($n = 29$) and control group ($n = 23$) consisted of 52% male and 48% female participants. In the treatment group, students were 90% Hispanic and 10% white; in the control, students were 87% Hispanic and 13% white. The treatment group consisted of 31% third graders, 38% fourth graders, and 31% fifth graders. The control group was made up of 43% third graders, 43% fourth graders, and 14% fifth graders.

Overview of Reading Together

Reading Together is a hybrid of the NIM and repeated readings. The teacher and student read aloud together, each with a copy of the text. The teacher reads slightly ahead of the student with appropriate prosody. After reading a page or paragraph together (depending on the length of the page), the student then rereads the section aloud once independently. The student and tutor continue this process for approximately 20 minutes. Although the main focus was on reading fluency, the tutor and students typically engaged in a short conversation about the text after the tutoring was complete. Finally, the volunteers took several minutes to complete an intervention log that recorded the time spent on the intervention (always 20 minutes), name of the volunteer, and any notes to the researcher (see Appendix). The timeline of the study is shown in Table 1.

The Tutors

The university faculty member and Island Elementary administrators led the effort to recruit tutors. Because the intervention requires a substantial commitment (one-on-one tutoring for one month for 20 minutes per day), the recruiters extended invitations to undergraduate

Table 1
Timeline of the Study

Date(s)	Activity
January 8	Recruitment Meeting and Method Training
January 9–10	Pre-Test Data Collection
January 13	Intervention Begins
February 7	Intervention Ends/Data Collection
February 10	Complete Data Collection
February 11–Spring Break	Continuation for those who responded to the intervention

and graduate students at the local university, as well as teachers, staff, parents, and existing tutors at Island Elementary. In the end, the list of volunteers included three undergraduate students in education, three tutors who worked for the district, a second grade teacher, two special education teachers, two Read-to-Succeed volunteers, the assistant principal, the instructional specialist, the library media specialist, a parent, and a university faculty member for a total of 16 volunteers. Some tutors only committed to working with one student, the majority with two, and some tutors dedicated their time to three students.

Of course, the researchers knew the varying prior experiences of the volunteers might present a challenge. Therefore, the researchers carefully constructed a presentation and training sessions for the volunteers, making sure to explain the method in simple terms, avoiding educational jargon. In addition, the training consisted of demonstrations and opportunities to practice Reading Together.

The Training

The primary researcher and trainer invited the volunteers to Island Elementary for a training session one day after school in the library in early December. The training began with introductions and moved into the history behind the intervention. Then, volunteers learned the step-by-step method as the trainer modeled Reading Together with a participating volunteer.

The tutors were instructed to use the NIM and repeated readings for each intervention session. They were told to instruct their respective students to read along aloud, noting that they would be reading slightly ahead of their students. The students would try to "chase" or "catch up" to the tutors. After reading the text or selected paragraphs, the tutors could then ask their students to reread each selection aloud independently, thus executing a repeated reading of the more challenging texts (Samuels, 1979).

Special attention was paid to the guidelines for "chunking" the selected texts. No rigid procedure was in place for determining where to stop the assisted reading and begin the repeated reading, so the trainer discussed the process as a type of trial and error. If the students could fluently reread the text, then size of the selection was appropriate; perhaps the assisted reading could cover more text before stopping. Conversely, if the student struggled with lengthier sections of text, the tutor was asked to reduce the amount of text in the section. However, a fine line existed between reducing the "chunks" of text, and reducing the difficulty of the text. If selection were reduced to mere sentences, the more appropriate action was to select a lower level text.

Tutors were trained to select texts on each of the students' designated intervention levels. If students struggled when rereading the text, tutors lowered the level and the tutor exchanged the books in the leveled-text library. The tutors were instructed to base the decision on their perceptions of their students' oral reading fluency. If the students read slowly and struggled with word recognition accuracy during the intervention, then the tutors were to select a lower-level book; however, this only occurred in one case. More commonly, the initially selected texts did not challenge the student while engaged in Reading Together; therefore, the tutor increased the level. If students could read the text fluently without assistance, the text was deemed too easy for the intervention. Tutors indicated changed levels on the student intervention logs. Because the texts varied in length, some sessions allowed students to read more than one book, while other times the students read the text over several sessions. When one book was complete, the tutors and students chose a new one; therefore, the texts were not used more than once.

During the training session, researchers also elaborated on the research behind the methods, the purpose for the combination, and the expected outcomes. The volunteer tutors

were told that NIM is a good way to model fluent reading, while simultaneously assisting the students in reading texts that the students might have trouble with if reading alone. In addition, the method supports prosodic reading in that students adopt the proficient readers' expressive prosody. The researcher explained further that the purpose of adding a repeated reading component was to provide students with immediate, more independent practice, opportunities for success, and so tutors could listen for expressive and accurate readings from their students rather than merely record a reading rate, which is a common assessment measure. Thus, in a sense, the Reading Together sessions were designed to provide a more advanced model of fluent, expressive reading in a reader-coach situation.

Finally, the volunteers completed availability forms and asked questions. The trainers responded to questions to clear up any misconceptions before adjourning the training. The researchers also provided handouts with information regarding the method, dates of the project, and student intervention logs (see Appendix), which also listed the following steps as a reminder for tutors:

Make sure you and the student have a copy of the text.
Read a page or paragraph aloud together.
Read slightly ahead of the student.
Read with good expression that matches the meaning of the text.
Have the student reread the page/paragraph aloud.
Continue with subsequent page/paragraphs for 20 minutes.
Complete the intervention log.

The Texts

The texts were chosen from the school's leveled-text library. Tutors were asked to choose a mix of fiction and nonfiction throughout the duration of Reading Together. The researcher asked tutors to allow the students to choose within the designated intervention text level. Informal observation indicated that this method was effective. Some tutors reported that students became interested in particular genres or a text series, evidenced by the students continuing to choose books in a certain genre or from a particular series.

The researcher assigned each student an intervention level that was eight levels above the students' independent reading level. The researchers recommended this practice because in the primary researcher's experience with Reading Together (Mohr et al., 2012), students were typically capable of reading and comprehending text approximately eight levels higher because of the assisted reading component. Previous research by Stahl and Heubach (2005) recommended that text for assisted readings be on the students' frustrational level. However, with the assistance provided and the selection of text segments, students do not actually become frustrated. Therefore, the more advanced texts challenged students in a supportive way; they were being used as instructional, even at the extreme end of a student's ZPD. This expectation aligns with the emphases of Common Core State Standards (NGA & CCSSO, 2010) that students should be reading more challenging materials, but with the modeling and support of an adult reader.

Duration

The goal was to tutor each student for approximately 400 minutes of Reading Together tutoring in one month. The students received Reading Together tutoring every school day for 20 minutes. The primary researcher assigned Reading Together tutors to individual

students based on the tutors' and students' availability. Although there were a few conflicts, such as assemblies and student absences, all of the students received at least 380 minutes with the majority of students receiving 400 minutes. The actual mean was 399 minutes per student.

Implementing the Program

For the first two days of implementation, the primary researcher remained at the school to monitor and support the tutors. The researcher instructed the tutors to call his cell phone in the event of any problems during tutoring. The most frequent question was whether students' levels should be increased. After discussing the ability of the individual student during the intervention, the researcher and tutor made an informed decision to either increase, decrease, or maintain the book level. To ensure fidelity, the researcher monitored all of the tutoring sessions to make certain that every student received the treatment. If students did not receive the treatment due to a scheduling error or absent volunteer, the researcher stepped in as the tutor. The schedule was then adjusted and problems were resolved. After the first two days, the researcher visited daily for an hour and a half, long enough to tutor his assigned three students and to clear up any program concerns.

Both the treatment and control groups continued to receive their regular reading instruction. The school utilized a balanced literacy program that included teacher read-alouds, shared reading, guided reading, independent reading, and word study. Students in the treatment group were pulled out of class for 20 minutes of their classroom reading instruction, receiving only 40 minutes of the regularly scheduled 60 minutes. The majority of the Reading Together students were pulled from either independent reading or center time. A small percentage of students, however, were pulled from class during teacher read-alouds.

Data Collection and Analysis

Data were collected prior to the intervention and directly following the intervention. The university researcher chose to measure several components of reading fluency, as well as use of the school's existing iStation reading assessment, a computer adaptive test that reports an overall reading score. The iStation assessment has several subtests that measure the following: Phonemic Awareness, Letter Knowledge, Alphabetic Decoding, Vocabulary, Spelling, and Comprehension. The students take the test monthly as required by the district for progress monitoring (Mathes, 2014). The overall reading score was based on two subtests that measure students' abilities in silent reading comprehension and vocabulary knowledge. The researcher administered students' iStation tests the week before and the week after the Reading Together treatment.

For the pre- and post-intervention fluency measures, the primary researcher utilized nonfiction grade level passages from the *Dynamic Indicators of Basic Early Literacy Skills—Oral Reading Fluency* (DIBELS-ORF; Good & Kaminski, 2002). The students read the first half of the passages for the pretest and the second half for the posttest. During the reading, the researcher recorded the number of words the student read correctly in one minute. In addition, the researcher scored the students on the Multidimensional Fluency Scale (MFS) (Zutell & Rasinski, 1991). This prosody rubric was used to calculate a MFS score in each of four categories: volume and expression, phrasing, smoothness, and pace. Each of the categories were scored on a four-point scale, one being the lowest demonstration of fluent reading and four being the highest (possible total scores ranged from 4 to 16).

Previous research has shown the MFS to be a reliable and valid measure of prosodic reading (Paige et al., 2012; Rasinski et al., 2009). In order to validate the primary researcher's ratings on the MFS, the researcher and creator of the MFS independently scored sample recordings of students' readings. An interrater reliability analysis using the Kappa statistic was performed to determine consistency among raters. The interrater reliability for the raters was a Kappa = 0.77 ($p < .001$), which is considered substantial agreement among raters.

The pre- and post-data from iStation, DIBELS-ORF, and MFS were analyzed in three separate paired-samples t-tests to compare individual student scores. The treatment group was then compared to the control group for each measure. To maintain the reliability of the comparison, pretest equivalency was also performed.

Results

Three paired-samples *t*-tests were conducted to compare the overall reading and fluency scores in the treatment and control conditions. There were no statistically significant differences among the two groups on the basis of the pretest measures of DIBELS-ORF and the MFS; thus, pre-experimental equivalence was assumed for these measures. The first paired-samples *t*-test measured increase in oral reading fluency (words read correctly per minute/WCPM) (see Table 2). In the treatment group, the pretest (M = 70.14, SD = 23.48) to posttest (M = 90.79, SD = 26.47) increase on words read correctly per minute was statistically significant. There was no significant difference in words read correctly per minute in the control group from pretest (M = 82.00, SD = 23.24) to posttest (M = 86.43, SD = 26.74). The standard deviation scores are large because of the differing grade level norms for words read correctly per minute.

There was also a significant difference in the measure of prosody (Multidimensional Fluency Scale scores) for the treatment group from pretest (M = 8.59, SD = 2.57) to posttest (M = 11.38, SD = 1.78) and no significant results for the control group from pretest (M = 9.48, SD = 2.59) to posttest (M = 9.70, SD = 2.65). These results are summarized in Table 3.

The third paired-samples *t*-test measured the mean differences in overall reading score measured by iStation (Table 4). A statistically significant difference in mean scores was found for the treatment group from pretest (M = 1323.10, SD = 756.21) to posttest (M = 1361.48, SD = 777.89). In the control group, there was no significance difference in overall reading score from pretest (M = 1097.87, SD = 778.23) to posttest (M = 1079.57, SD = 764.68) in one month. The standard deviation scores are even larger here because the iStation raw scores in this study ranged from the third grade minimum of 203 to the fifth grade maximum of 2116. In addition, the control group mean scores were much lower because the treatment had fewer fifth grade students (31% in treatment and 14% in control).

Table 2

Paired-Samples *T*-Test of Oral Reading Fluency (Words Correct Per Minute) (*N* = 52)

Measure	Pretest Mean	Posttest Mean	*T*	*p*-value (2-tailed)	ES[a]
Treatment (*n* = 29)	70.14	90.79	−5.84	<.01	1.08
Control (*n* = 23)	82.00	86.43	−1.60	.12	.33

Note. [a]ES, effective size as measured by Cohen's *d,*
.02 = small effect, .5 = medium effect, .8 = large effect.

Table 3

Paired-Samples *T*-Test of the Multidimensional Fluency Scale (*N* = 52)

Measure	Pretest Mean	Posttest Mean	*t*	*p*-value (2-tailed)	ES[a]
Treatment (*n* = 29)	8.59	11.38	−7.78	<.01	1.44
Control (*n* = 23)	9.48	9.70	−.84	.41	.18

Note. [a]ES, effective size as measured by Cohen's *d,*
.02 = small effect, .5 = medium effect, .8 = large effect.

Table 4

Paired-Samples *T*-Test of iStation Overall Reading Score (*N* = 52)

Measure	Pretest Mean	Posttest Mean	*t*	*p*-value (2-tailed)	ES[a]
Treatment (*n* = 29)	1323.10	1361.48	−3.04	<.01	.56
Control (*n* = 23)	1097.87	1079.57	1.26	.22	.26

Note. [a]ES, effective size as measured by Cohen's *d,*
.02 = small effect, .5 = medium effect, .8 = large effect.

In summary, the results indicated that Reading Together had a large effect on students' increase in word recognition automaticity (words read correctly per minute) and their prosodic reading as measured by their oral reading performance using the Multidimensional Fluency Scale (MFS). The Reading Together treatment also had a more muted effect on students' overall reading score as measured by iStation. Overall, the Reading Together treatment successfully increased students' reading performance on all measures.

Discussion

The Reading Together intervention had the largest effect (1.44) on the outcomes measured by the MFS. Therefore, students who engaged in Reading Together sessions following the reading modeled by an adult for 20 days demonstrated significant gains in expression and volume, smoothness, phrasing, and pace while reading aloud. The tutors' direct modeling of prosodic reading with challenging, authentic texts and the immediate practice carried out by the students facilitated the more fluent reading demonstrated at the end of the month.

The mean difference effect on Oral Reading Fluency (words correct per minute) was also large (1.08). These results reveal that the Reading Together intervention also increased students' reading rates, corroborating research on repeated readings as successfully increasing reading rate (Freeland, Skinner, Jackson, McDaniel, & Smith, 2000; Mathes & Fuchs, 1993; Mercer, Campbell, Miller, Mercer, & Lane, 2000; Rasinski, Padak, Linek, & Sturtevant, 1994). Moreover, the mean weekly gain in oral reading fluency (words correct per minute) for the Reading Together students was calculated to be a 5.2 words per minute gain per week. This is substantially greater than the weekly gain of 1.5 words correct per minute identified as an ambitious goal for struggling readers (Fuchs, Fuchs, Hamlett, Walz, & Germann, 1993).

This research expands extant reading fluency research by providing a new method for increasing the components of reading fluency: automaticity and prosody. However, an ad hoc pre- and posttest indicated that Reading Together also had a moderate effect on

students' overall reading as measured by a computer-based reading assessment. Thus, this study supports the premise of automaticity theory (LaBerge & Samuels, 1974). As the students' reading word recognition automaticity increases, cognition is freed to focus on reading comprehension, positively impacting the overall reading scores significantly.

In addition, the intervention helped teachers meet an expectation set forth by the Common Core State Standards (NGA & CCSSO, 2010) by exposing students to complex text. Because the texts were several levels higher than the students' independent levels, students gained experiences with more complex texts. Without assistance the students may have become frustrated, but the strong support provided by tutors and the brief, 20-minute sessions created a context for success even with difficult reading material.

Another important finding from this study was the viability of the Reading Together method. Reading Together is a simple intervention that can be done in minutes and with existing materials. Moreover, training tutors in Reading Together can be done in less than an hour. The fact that not all of the tutors were certified teachers suggests that, with training, nearly anyone who is comfortable and capable of modeling oral reading can execute the method. Although some challenges existed, such as locating volunteers and matching tutors' availability and the students' availability, the whole program was relatively easy to manage once it was up and running. In addition, the undergraduates who participated gained valuable experiences working with striving readers; parents learned a new strategy to help their own children at home; the administrators were afforded an opportunity to interact with students in an academic and positive manner; and participating teachers were able to work with students in another grade level. Finally, the university faculty member fostered a mutually beneficial relationship between the university and the local elementary school. In fact, because of the success and easy implementation of Reading Together, the principal invited the researcher back to the school for curriculum night. The researcher taught the parents how to conduct the method at home. The parents and teachers were appreciative; some teachers mentioned that they had begun using the method with students not included in the study.

Reading Together, as a possible large-scale, multi-grade intervention, was a success in this particular setting. The students in the treatment group grew significantly on multiple measures of reading over students in the control group. After the intervention, the primary researcher met with school administrators to look at individual student gains. Students who made substantial gains continued with the Reading Together intervention, and those who did not demonstrate similar success were targeted for a new intervention. The committee decided that 5 of the 29 students needed an alternate intervention because the students' reading fluency measures did not increase substantially (e.g., Fuchs et al., 1993), and the remaining students continued the intervention (83%). While the statistics indicated strong success in general, the expectation is that 100% of the students make growth, and teachers know that no single one-size-fits-all intervention exists.

Upon informal examination of the data, there did not appear to be a particular grade level or demographic that predicted the success of the method, but the relatively small sample size did not allow for a statistical comparison of sub-groups. Logically, it holds that if a lack of fluency is the concern manifested in students who struggle in reading, instruction in fluency should yield positive results. Because the method utilized volunteers and yielded positive results in a fairly short period of time (4 weeks), implementation is relatively easy and success of the method can be determined quickly. Thus, if students are struggling with reading fluency, perhaps assembling volunteers and implementing Reading Together could support the students' reading fluency achievement while maintaining regular reading instruction in elementary schools.

Limitations and Further Research

At this point it is difficult to say whether NIM or repeating readings had a larger influence on students' reading fluency development, and how much that influence is increased by stacking them and conducting Reading Together. The relatively small number of students did not allow for analysis of sub-group comparisons. Because the author of the MFS measurement and Reading Together intervention was heavily involved, it might be difficult to implement Reading Together in other situations without a strong and knowledgeable leader. In addition, this research did not measure if the effect of Reading Together was sustained over time. The study would be strengthened by retesting the students at a later date to examine the effect of Reading Together months after the intervention was delivered.

We need and encourage further research into Reading Together that would reveal its effectiveness with various grade levels or types of students (e.g., male and female, motivated and reluctant). It would be important to determine if the fluency gains are maintained over time and if reading rates of Reading Together students continue similarly to that of stronger readers and in various genres of text. It would also be valuable to add a measure of student motivation as part of a Reading Together intervention to better understand the influence of the social interaction between adult and student and students' perception of the challenging texts. Adding a follow-up element to see if treatment students choose more challenging texts for independent reading and/or if their volume of reading increased following Reading Together success would be powerful. This study dedicated 400 minutes to Reading Together, which was in between NIM's previously researched allocations of 720 (Heckelman, 1969) and 200 minutes (Flood et al., 2005). Therefore, to increase the efficiency of Reading Together, future research should determine an optimum number of minutes required to increase students' oral reading fluency that platforms more proficient reading and how the intervention supports comprehension. It would also be worth comparing the different effects of repeated readings, NIM, and Reading Together.

Given its initial success, we invite and encourage teachers and reading interventionists to consider using Reading Together as a strategy for improving the reading fluency and overall reading outcomes for their students, especially those shown to struggle with prosodic reading at an appropriate pace. Clearly, reading fluency is a key for general reading success. Moreover, research has demonstrated that substantial numbers of students who struggle in reading manifest difficulties in reading fluency. Our study suggests an intervention option that is practical, time efficient, and effective. If we can help students establish a strong foundation in oral reading and fluency, we are setting the stage for future reading proficiency.

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Appendix

Intervention Log

Student Name: _____

Grade Level: _____ Availability: _____

IRL: _____ Intervention Level Start: _____ Interventional Level End: _____

Jan 13	Minutes	Volunteer Name	Notes
14			
15			
16			
17			
20			
21			
22			
23			
24			
27			
28			
29			
30			
31			
Feb 3			
4			
5			
6			
7			
Total			

1. Make sure you and the student have a copy of the text
2. Read a page or paragraph aloud together
    a. Read slightly ahead of the student
    b. Read with good expression that matches meaning of text
3. Have the student reread the page/paragraph aloud
4. Continue for 20 minutes
5. Complete the intervention log